

Service Manual

Mini Cassette Recorder

Mini Cassette

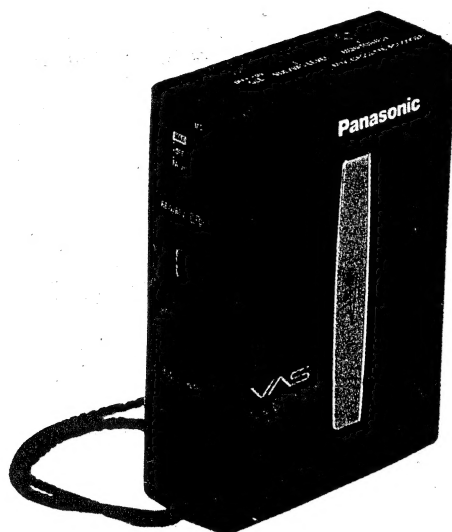
RQ-L315

Color

(K)..... Black Type

Area

Country Code	Areas	Color
[P]	U.S.A.	(K)



RQ-310 MECHANISM SERIES (SG-10)

■ SPECIFICATIONS

Power Requirement: Battery; 3V (Two R6/LR6, "AA" size batteries)
AC; with optional Panasonic AC Adaptor RD-9443HA

Motor: Electric governor motor

Power Output: 400mW (R.M.S. max)

Frequency Response: 180 ~ 6,000Hz

Recording System: DC bias, Magnet erase

Tape Speed: 4.8cm/s (1 $\frac{7}{8}$ ips)

Track System: 2-track monaural recording and playback

Program Time: 1 hour with C-60 cassette tape

Jacks: Inpnt: DC in; 3V
Output: Monitor; (8 Ω) ϕ 3.5

Speaker: 1 $\frac{3}{4}$ " (4.5cm) PM dynamic speaker (8 Ω)

Dimensions: 86(W) \times 121.5(H) \times 33.5(D)mm
(3 $\frac{3}{8}$ " \times 4 $\frac{7}{16}$ " \times 1 $\frac{5}{16}$ ")

Weight: 216g (7.6oz), without batteries

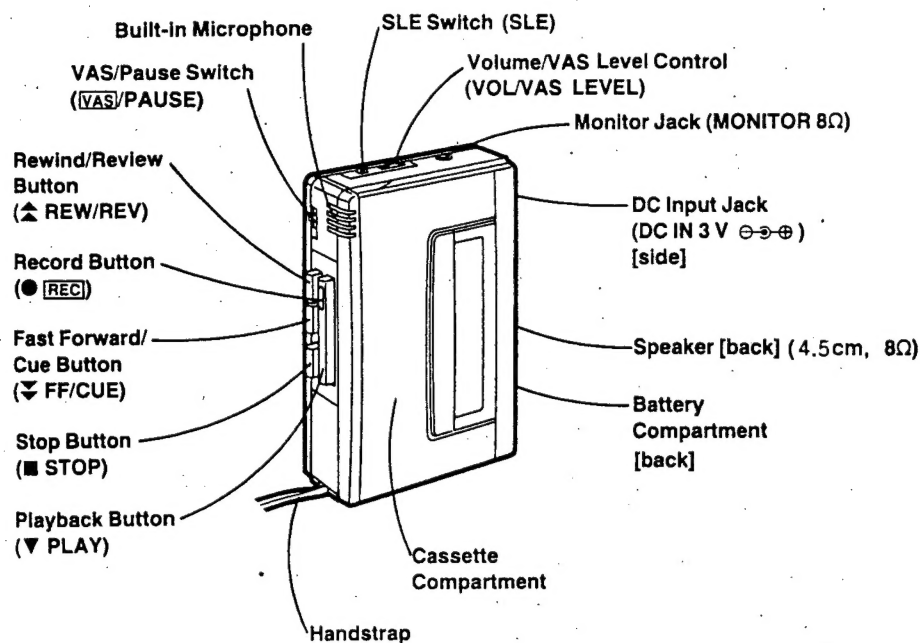
Weights and dimensions shown are approximate
Design and specifications are subject to change without notice.

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LOCATION OF CONTROLS AND COMPONENTS



BATTERY SERVICE LIFE

UM-3 (AA-size) Batteries

Approx. 4.4 hours of playback (EIAJ) with volume set at 3/4 position

Approx. 4.2 hours of recording (EIAJ)

The above battery service life is measured according to the conditions set forth by EIAJ (Electronic Industries Association of Japan). As the battery service life varies with the method of operation and environmental conditions, use these values as reference.

DISASSEMBLY INSTRUCTIONS

■ Removal of the Rear Cabinet (Fig. 1)

1. Remove screws (A) (2×10) mm.
2. Then remove panel from the unit.

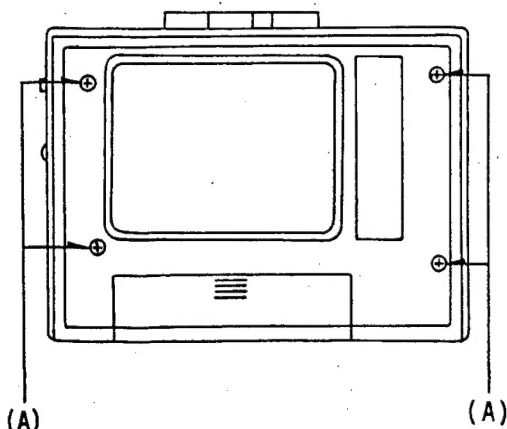


Fig. 1

■ Removal of the Cassette Lid (Fig. 2)

1. With a screwdriver, push cassette foot-Ⓐ in the direction of arrow ①.
2. Then pull out the foot after pushing the spring on the front cabinet.
3. Remove cassette foot-Ⓑ by pushing it in the direction of arrow ② and then pulling it outward.

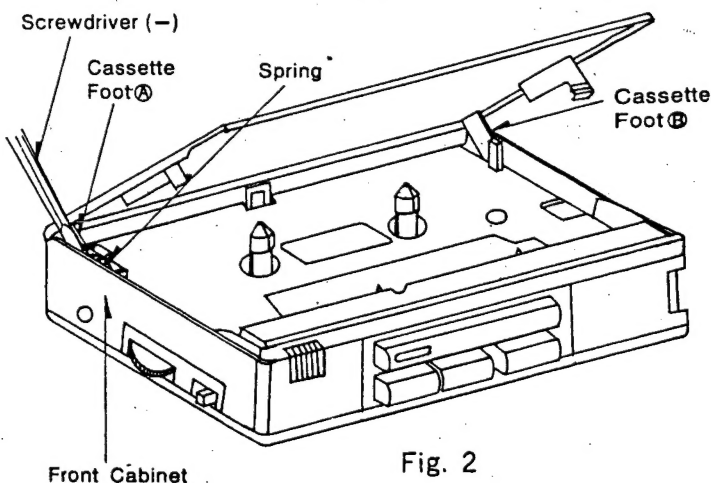


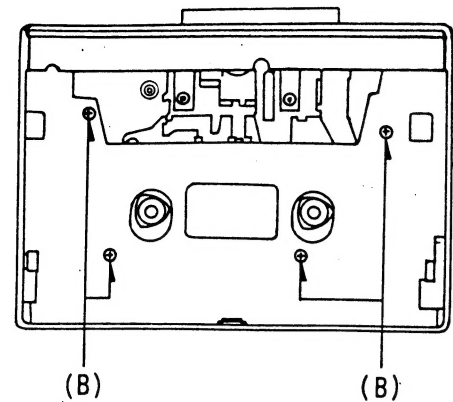
Fig. 2

Note: Keep all parts together for reassembly.

Note: When pushing the foots on the front cabinet with the screwdriver, do it with care.

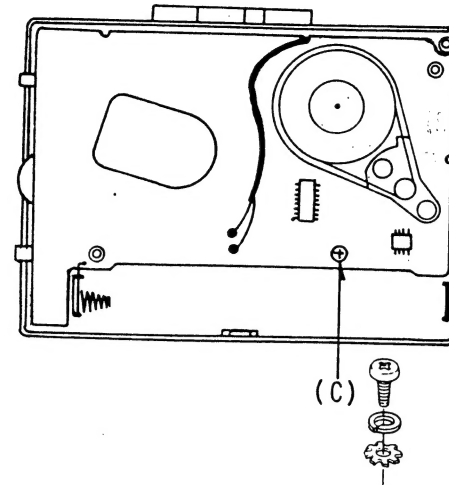
■ Removal of the Front Cabinet (Fig. 3).

1. First remove screws (B) (1.7×4.5) mmX2
2. Then remove front cabinet.

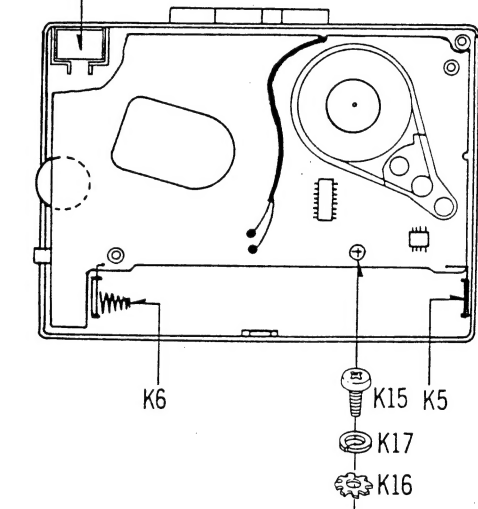
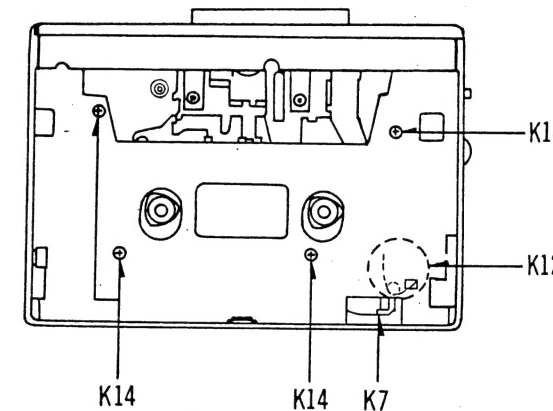
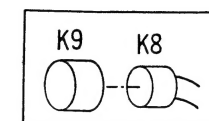
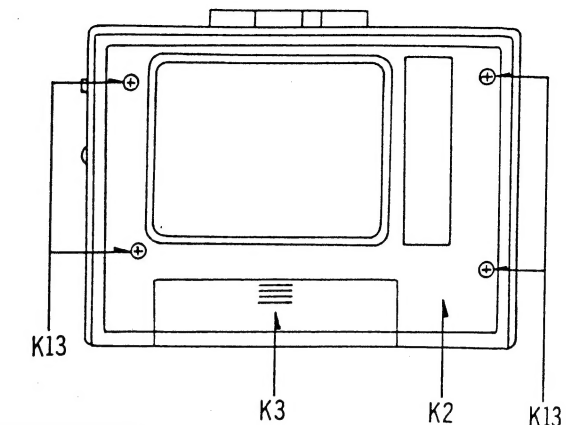
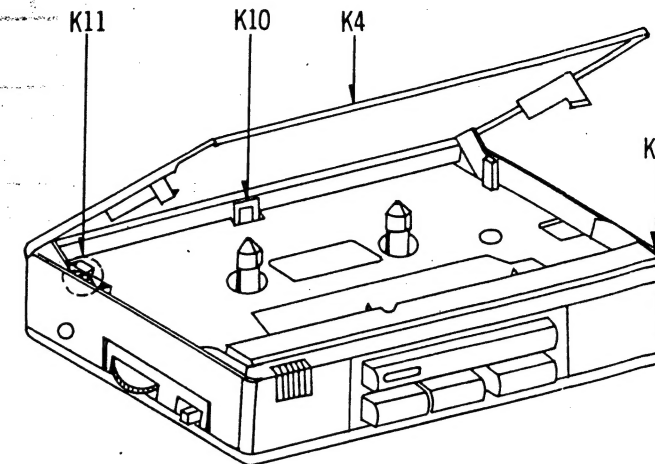


■ Removal of the Circuit board (Fig. 4).

1. Remove screw (C) (2×16) mm.X1
2. Then remove circuit board from the unit.



CABINET PARTS LOCATION



MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Make sure heads are clean.
2. Make sure capstan and pressure roller are clean.
3. Set volume control to maximum.
4. Set power source voltage to 3V DC.

■ ADJUSTMENT

ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
Head azimuth	QZZCSX (6.3kHz, -10dB)	Monitor jack (8Ω)	Maximum output	Head adjustment screw (See Fig. 1)	For tape playback
Tape speed	QZZCWAT (3kHz, -10dB)	Monitor jack (8Ω)	3000±60 Hz	VR2 (Tape speed adjustment VR) (see Fig. 2)	For tape speed adjustment: (1) Play back test tape. (2) Adjust VR2 until a counter reading within the specified tolerances is obtained.

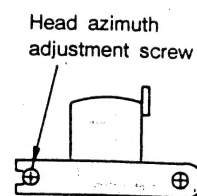


Fig. 1

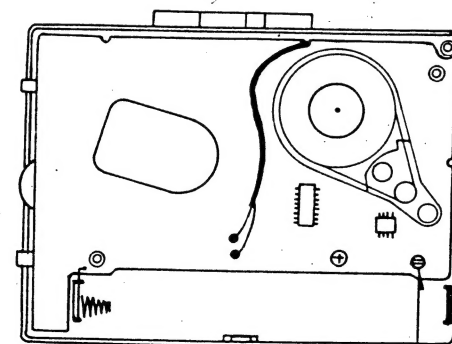


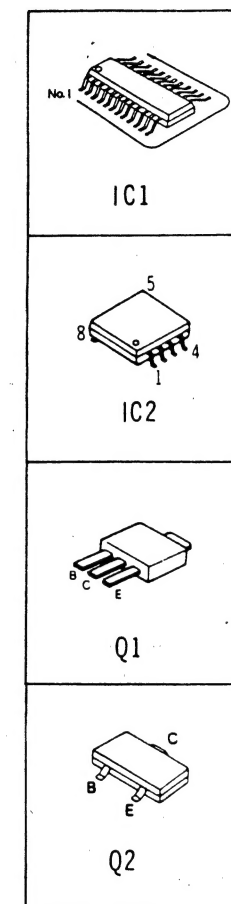
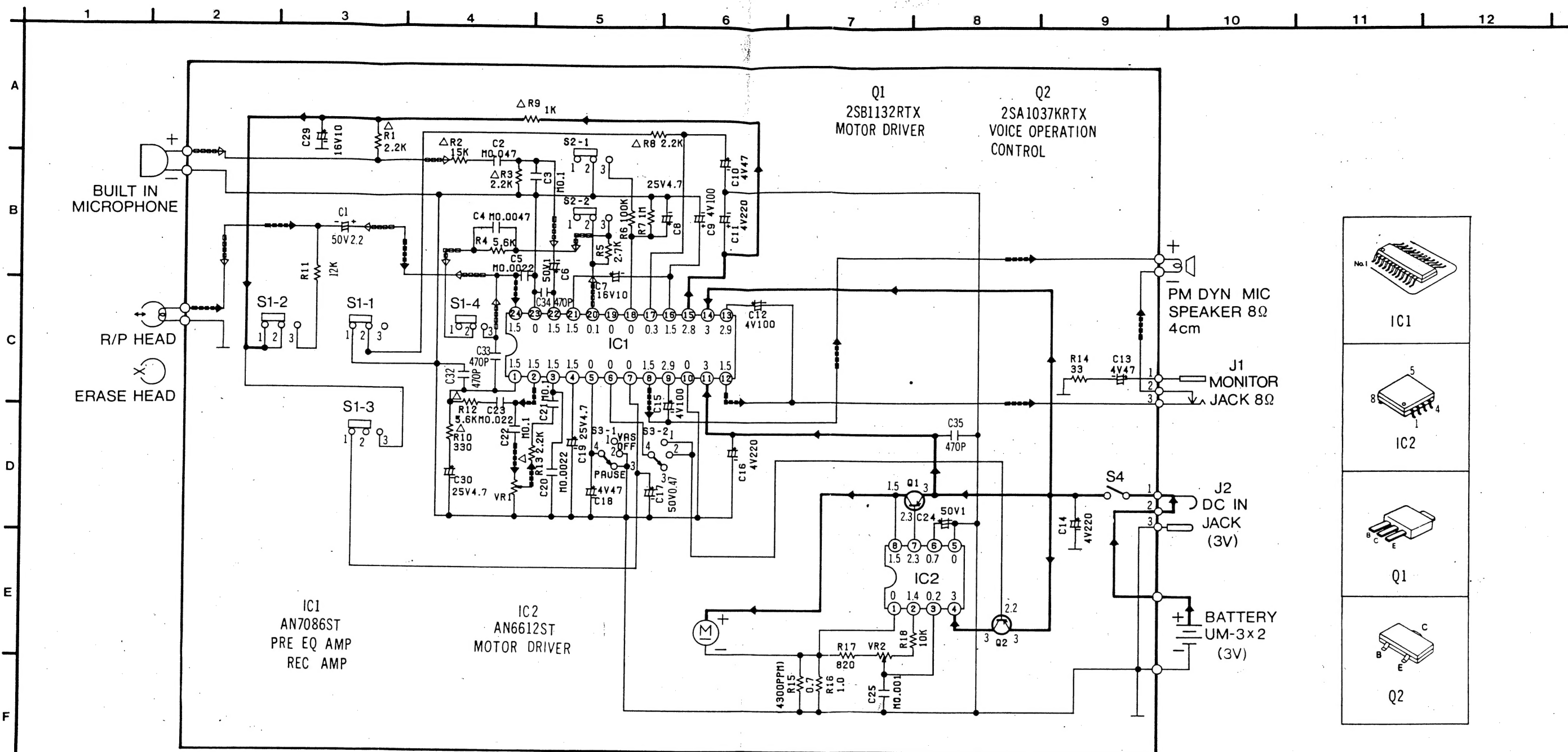
Fig. 2 VR2 (Tape speed adjustment VR)

■ REPLACEMENT PARTS LIST

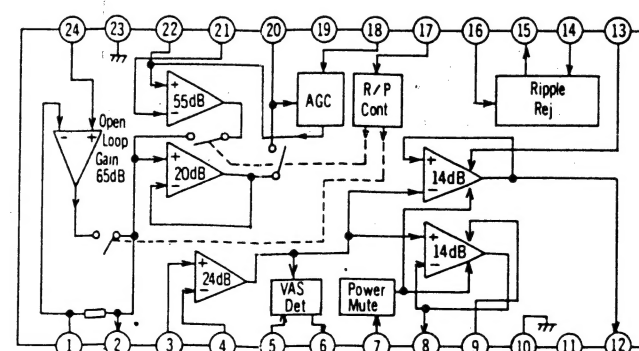
□ Indicates parts supplied by TAMACO

Ref. No.	Parts No.	Parts Name & Description	Ref. No.	Parts No.	Parts Name & Description
CABINET PARTS					
K1□	RYMOL315PKT	Front Cabinet Ass'y	K15□	XTN2+16FFN	Screw
K2□	RKF265TZA	Rear Cabinet	K16	XWA2B	Washer
K3□	RKK225TZA	Battery Cover	K17□	XWE2X4BN	Spring Washer
K4□	RYQOL315PKT	Cassette Cover Ass'y	ACCESSORY		
K5□	RJC293TZA	Terminal Battery (+)	A1□	RKH91ZA	Handle Strap
K6□	RJC294TZA	Spring Battery (-)	A2□	RQX784TZA	Instruction Manual
K7□	RHR275TZA	Safety Lever (REC)	PACKING MATERIALS		
K8□	RJM172ZB	MIC	P1□	RPK483TZA	Clam Shell (Front)
K9□	RHG232TYA	MIC Rubber	P2□	RPK484TZA	Clam Shell (Rear)
K10□	RUS253TZA	Tape Spring	P3□	RPN1439TZA	Pad
K11□	RUS254TZA	Cassette Cover Spring	P4□	RPP405TZA	Polyethylene Cover
K12□	RUS257TZA	Safety Lever Spring			
K13□	XTNR2+10CFZ	Screw			
K14□	XTN17+4.5FFN	Screw			

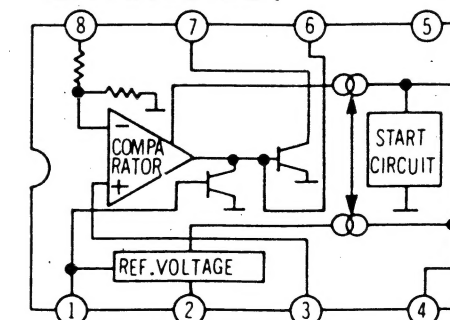
SCHEMATIC DIAGRAM



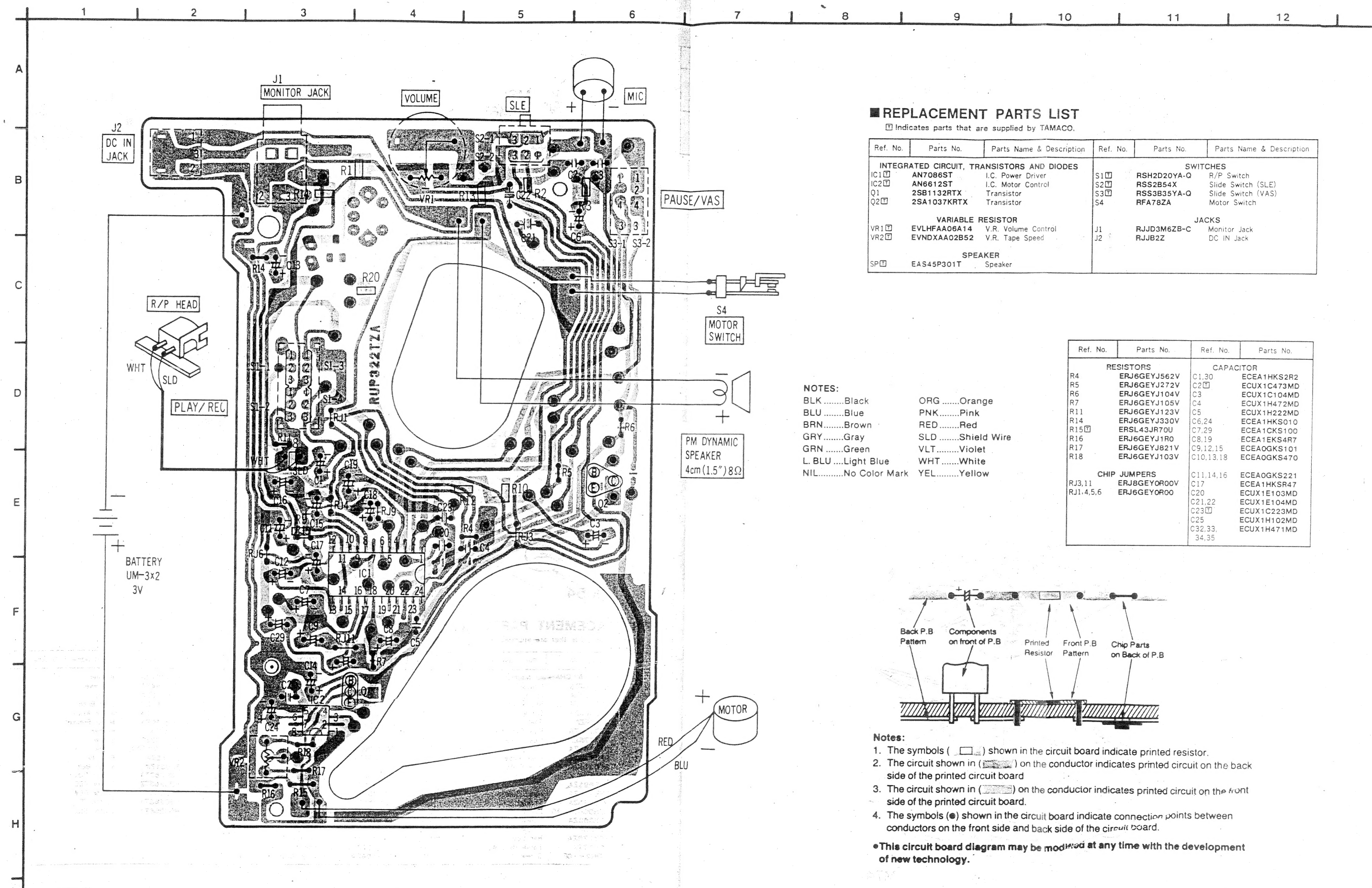
IC1 AN7086ST



IC2 AN6612ST



CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM



REPLACEMENT PARTS LIST

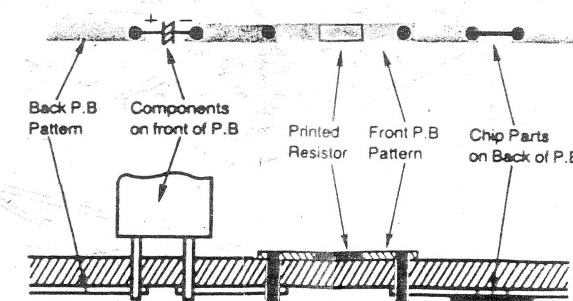
Indicates parts that are supplied by TAMACO.

Ref. No.	Parts No.	Parts Name & Description	Ref. No.	Parts No.	Parts Name & Description
INTEGRATED CIRCUIT, TRANSISTORS AND DIODES			SWITCHES		
IC1	AN7086ST	I.C. Power Driver	S1	RSH2D20YA-Q	R/P Switch
IC2	AN6612ST	I.C. Motor Control	S2	RSS2B54X	Slide Switch (SLE)
Q1	2SB1132RTX	Transistor	S3	RSS3B35YA-Q	Slide Switch (VAS)
Q2	2SA1037KRTX	Transistor	S4	RFA78ZA	Motor Switch
VARIABLE RESISTOR			JACKS		
VR1	EVLFHAA06A14	V.R. Volume Control	J1	RJJD3M6ZB-C	Monitor Jack
VR2	EVNDXAA02B52	V.R. Tape Speed	J2	RJJB2Z	DC IN Jack
SPEAKER					
SP	EAS45P301T	Speaker			

NOTES:

BLKBlack
 BLUBlue
 BRNBrown
 GRYGray
 GRNGreen
 L. BLULight Blue
 NILNo Color Mark
 ORGOrange
 PNKPink
 REDRed
 SLDShield Wire
 VLTViolet
 WHTWhite
 YELYellow

Ref. No.	Parts No.	Ref. No.	Parts No.
RESISTORS		CAPACITOR	
R4	ERJ6GEYJ562V	C1,30	ECEA1HKS2R2
R5	ERJ6GEYJ272V	C2	ECUX1C473MD
R6	ERJ6GEYJ104V	C3	ECUX1C104MD
R7	ERJ6GEYJ105V	C4	ECUX1H472MD
R11	ERJ6GEYJ123V	C5	ECUX1H222MD
R14	ERJ6GEYJ330V	C6,24	ECEA1HKS010
R15	ERJ6GEYJ123V	C7,29	ECEA1CKS100
R16	ERJ6GEYJ1R0	C8,19	ECEA1EKS4R7
R17	ERJ6GEYJ821V	C9,12,15	ECEA0GKS101
R18	ERJ6GEYJ103V	C10,13,18	ECEA0GKS470
CHIP JUMPERS		C11,14,16	ECEA0GKS221
RJ3,11	ERJ8GEYOR00V	C17	ECEA1HKS4R7
RJ1,4,5,6	ERJ6GEYOR00	C20	ECUX1E103MD
		C21,22	ECUX1E104MD
		C23	ECUX1C223MD
		C25	ECUX1H102MD
		C32,33	ECUX1H471MD
		34,35	



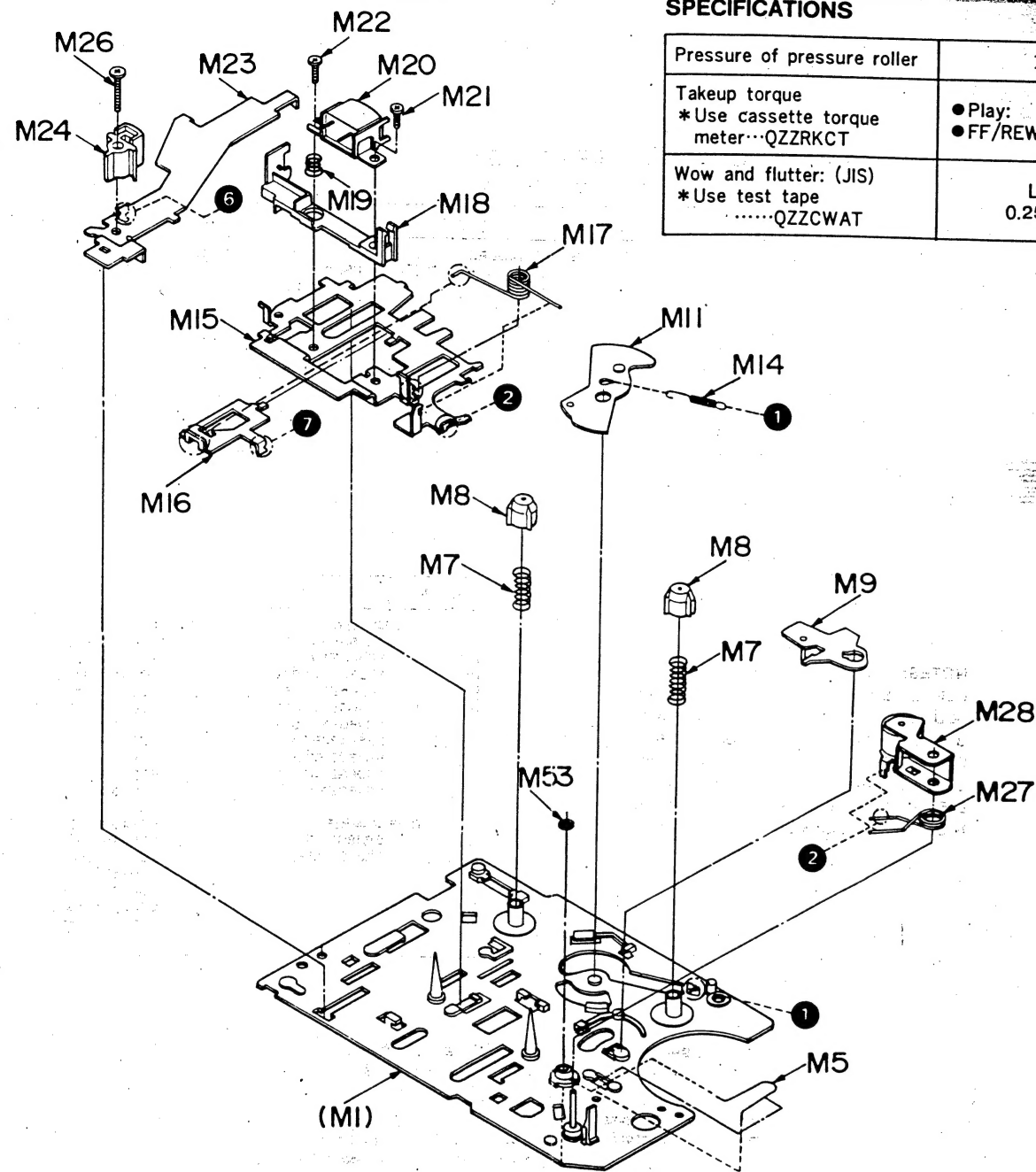
Notes:

- The symbols () shown in the circuit board indicate printed resistor.
- The circuit shown in () on the conductor indicates printed circuit on the back side of the printed circuit board.
- The circuit shown in () on the conductor indicates printed circuit on the front side of the printed circuit board.
- The symbols (•) shown in the circuit board indicate connection points between conductors on the front side and back side of the circuit board.

This circuit board diagram may be modified at any time with the development of new technology.

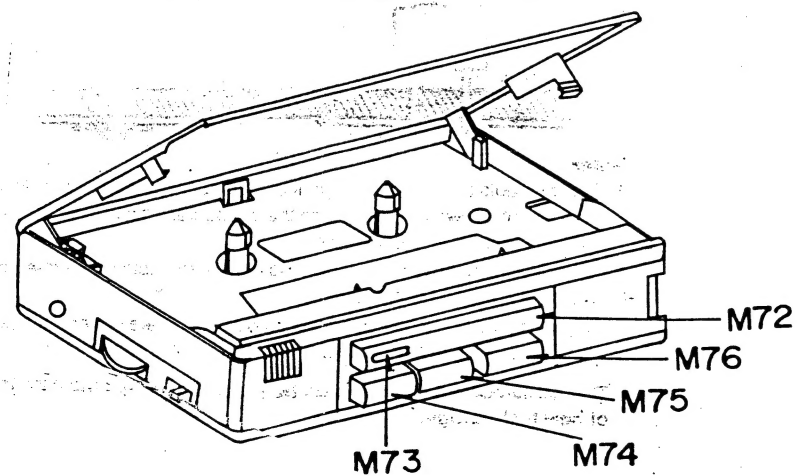
MECHANISM PARTS LOCATION

Front View

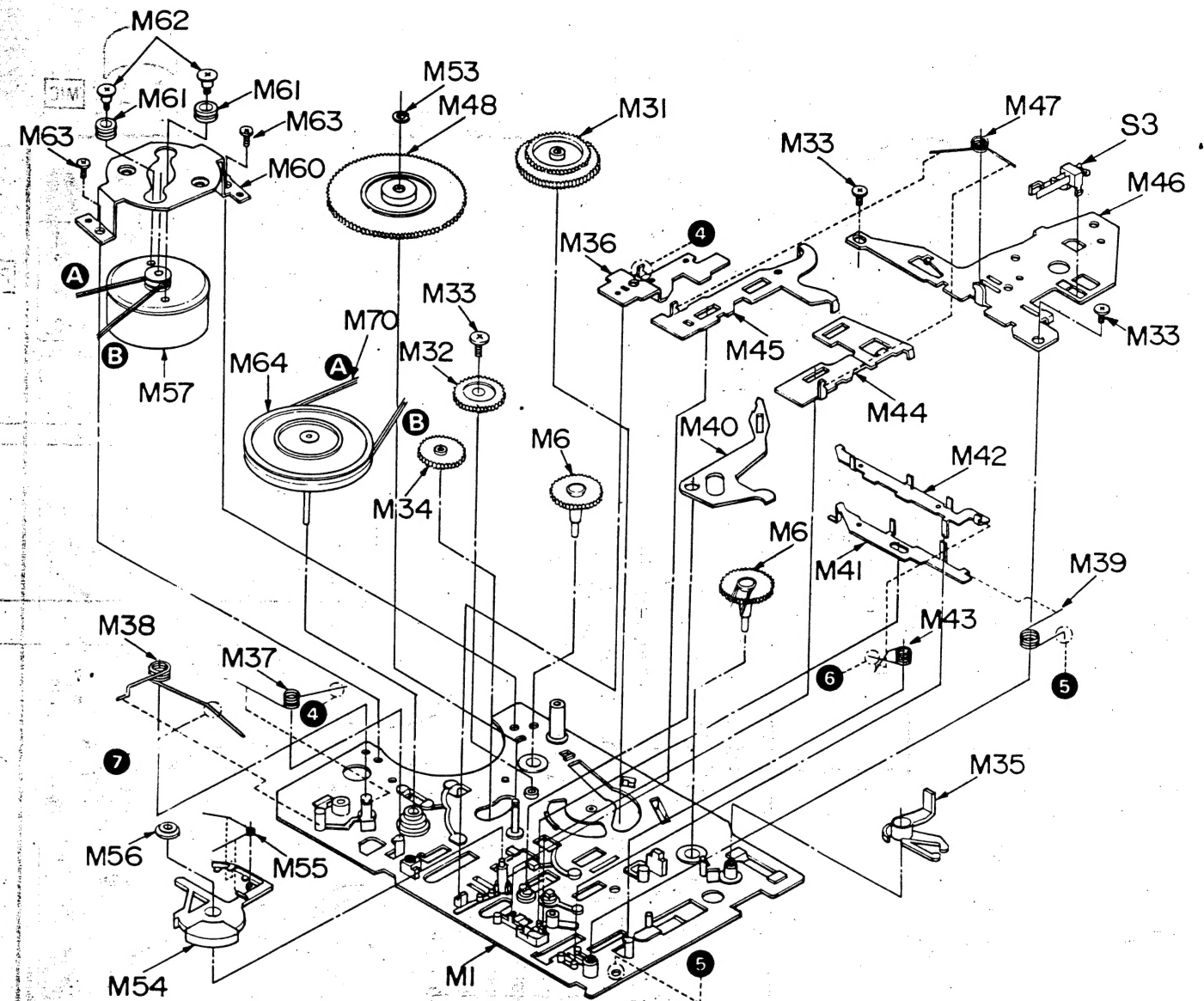


SPECIFICATIONS

Pressure of pressure roller	160±40g
Takeup torque *Use cassette torque meter...QZZRKCT	● Play: 36±14g-cm ● FF/REW: 110±50g-cm
Wow and flutter: (JIS) *Use test tapeQZZCWAT	Less than 0.25% (WRMS)



Rear View



REPLACEMENT PARTS LIST

Ⓜ Indicates parts that are supplied by TAMACO.

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
MECHANISM PARTS								
M1	RFU115ZA	Chassis Ass'y	M27	RFS697ZA	Spring	M53	RFN202ZA	Washer
M5	RFS692ZA	Spring	M28	RFR432ZA	Pinch Roller Ass'y	M54	RFY784ZA	AS Lever
M6	RFG100ZA	Reel Gear	M31	RFG101ZA	Center Gear	M55	RFS703ZA	Spring
M7	RFS693ZA	Spring	M32	RFG102ZA	FF Gear	M56	RFX154ZA	Gear Bush
M8	RFJ69ZA	Reel	M33	RFE304Z	Screw	M57	RFM113ZA	Motor Ass'y
M9	RFD318ZA	Play Gear Plate Ass'y	M34	RFG103ZA	Play Gear	M60	RFD320ZA	Motor Bracket
M11	RFY775ZA	Gear Lever Ass'y	M35	RFY777ZA	Rec Arm	M61	RFI48ZA	Rubber
M14	RFS694ZA	Spring	M36	RFY778ZA	Stop Lever	M62	RFE366ZA	Screw
M15	RFU116ZA	Head Base	M37	RFS698ZA	Spring	M63	XON16+CF3	Screw
M16	RFD319ZA	Play Plate	M38	RFS699ZA	Spring	M64	RFF50ZA	Flywheel
M17	RFS695ZA	Spring	M39	RFS700ZA	Spring	M70	RFB81ZA	Motor Belt
M18	RFE362ZA	Head Guide	M40	RFY779ZA	F. R Lever	M72	RBC262TY	Button Play
M19	RFS696ZA	Spring	M41	RFY780ZA	Switch Lever	M73	RBC263TZ	Button REC
M20	RJHOC03YYAB	R/P Head	M42	RFY781ZA	Lock Lever	M74	RBC264TY	Button REW
M21	RFE363ZA	Screw	M43	RFS784ZA	Spring	M75	RBC265TY	Button FF
M22	RFE364ZA	Screw	M44	RFY782ZA	REW Lever	M76	RBC266TY	Button Stop
M23	RFY776ZA	Rec Lever	M45	RFY783ZA	FF Lever			
M24	RFH17ZA	Earse Head Ass'y	M46	RFE367ZA	Lever Guide			
M26	XQN2+10F	Screw	M47	RFS702ZA	Spring			
			M48	RFG104ZA	Friction Gear Ass'y			